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ABSTRACT OF THE DISCLOSURE

The present invention that provides a network topology for an ATM network. The topology includes a source network element, at least one intermediate network element, and a distributed virtual path connecting the source network element and the intermediate network elements. The distributed virtual path includes a virtual circuit that originates from the source network element and a virtual circuit that originates from at least one of 10 the intermediate network elements. The distributed virtual path originates from the source network element and may terminate on a destination network element or on the source network element (thereby 15 forming a ring). The network elements may be, for example, computers, satellites or other communications devices.